

REMARKS

This amendment is being filed in response to the Office Action having a mailing date of March 6, 2006. Claims 2-4, 6, and 8 are canceled herein. Claims 1, 5, and 10 are amended. Claim 12 is new. No new matter has been added. With this amendment, claims 1, 5, 7, and 9-12 are pending in the application. Reconsideration of the present application in view of the above amendments and the following remarks is respectfully requested.

I. Rejected Claim 1 under 35 U.S.C. § 102(e)

In the Office Action, the Examiner rejected claim 1 as being unpatentable under 35 U.S.C. 102(e) in view of U.S. Patent No. 6, 788,635 to Aratani *et al.* (hereafter “Aratani”). The applicants have amended independent claim 1 to include the limitations of dependent claim 3, and claim 3 has been canceled. Original claim 3 includes limitations that are novel and not obvious in view of Aratani. Accordingly, amended claim 1 is not anticipated or unpatentable by the prior art.

II. Rejected Claims 1 and 3 under 35 U.S.C. § 103(a)

The Examiner further rejected claims 1 and 3 as being unpatentable under 35 U.S.C. 103(a) in view of U.S. Pub. No. 2002/0060979 to Tsukuda *et al.* (hereafter “Tsukuda”) in view of Aratani. The applicants thank the Examiner for considering claims 1 and 3, but disagrees with the Examiner’s interpretation of the prior art. In light of the arguments below, the applicants urge that claim 1, as amended, is now allowable.

A. The prior art discloses a single recording film; not multiple recording films

In rejecting claim 3, the Examiner has stated that in the prior art, “each of the plurality of recording layers includes a first recording film ... and a second recording film.” The applicants respectfully disagree. Each of Tsukuda’s recording layers contain only a single

recording film, whereas each recording layer in the present application includes, *inter alia*, a first recording film and a second recording film.

Referencing FIG. 1, Tsukuda clearly identifies two recording layers, each comprising a single recording film sandwiched between two dielectric films. Tsukuda identifies recording layer 103 comprising recording film 105 sandwiched between dielectric films 104 and 106 (paragraph [0043]). Tsukuda further identifies a second recording layer 109 comprising recording film 111 sandwiched between dielectric films 110 and 112 (paragraph [0044]). In contrast, each recording layer in the present application includes a first recording film and a second recording film disposed in the vicinity of the first recording film (*i.e.* each recording layer in amended claim 1 has two recording films, whereas each recording layer in the prior art has only one recording film). Tsukuda does not disclose, teach, or suggest more than a single recording film in any recording layer. Accordingly, amended claim 1 is not obvious in light of the prior art.

B. The prior art discloses an element that changes phase, not elements that mix

The Examiner has stated that claim 3 was further rejected because in the prior art, “the element contained in the first recording film ... and the element contained in the second recording film ... are mixed when ... irradiated with a laser beam.” The applicants strongly disagree. Instead of *mixing* (as in the present application), Tsukuda’s invention discloses a single recording film containing an alloy that *changes phase*.

Tsukuda’s recording films 105 and 111 are made out of phase change material (paragraphs [0043] and [0044]). In Tsukuda’s invention, when the first data recording layer 103 is irradiated with a laser beam, the phase change material contained in recording film 105 is changed from a crystalline state to an amorphous state thereby forming a recording mark therein. It is evident from Tsukuda’s specification and FIG. 1 that the phase change material from recording film 105 is never mixed with the element contained in the dielectric film 104. Similarly, when the second data recording layer 111 is irradiated with a laser beam, the phase change material contained in recording film 111 is changed from a crystalline state to an

amorphous state thereby forming a recording mark therein. The phase change material from recording film 111 is never mixed with the element contained in the dielectric film 111. On the contrary, the present application discloses that the first recording film and the second recording film are mixed when the primary component of first recording film and the primary component of the second recording film are irradiated with a laser beam. Amended claim 1 is therefore allowable because the prior art does not disclose, teach, or suggest recording films containing primary components that are mixed when irradiated with a laser beam.

C. The prior art does not incorporate Ge or Zn as a primary component

In the office action, claim 3 was rejected, in part, because Tsukuda discloses recording films 105 and 111 of primarily GeTeSb and dielectric films 104, 106, 110, and 112 of primarily ZnS (paragraphs [0043] and [0044]). In contrast, the present application discloses, *inter alia*, a first recording film containing ... Ge ... as a primary component and second recording film ... containing ... Zn ... as a primary component. The applicants acknowledge that Ge is one component of an alloy used by Tsukuda and that Zn is one component of another alloy used by Tsukuda, but the applicants submit that Tsukuda discloses the alloy, GeTeSb, specifically because it is a phase change recording material, and Tsukuda discloses the alloy, ZnS, specifically because it is a dielectric material.

Instead of mixing the elements, as in the present application, Tsukuda's invention works by changing the phase of the recording film elements to a crystalline or amorphous state (paragraph [0063]). In the GeTeSb alloy, which Tsukuda discloses as his phase changing material, Ge is not a primary component, and in the ZnS alloy, which Tsukuda discloses as his dielectric, ZnS, does not contain Zn as a primary component (paragraphs [0043] and [0044]). Accordingly, amended claim 1 is further allowable because the prior art does not disclose, teach, or suggest the use of Ge and Zn as primary components in the manner recited by the applicants.

III. New Dependent Claim 12

The applicants have added dependent claim 12, which covers patentable subject matter found in the original specification on Page 9, lines 4-6. Each dependent claims inherits

the limitations of its respective base claim and all intervening claims. Therefore, allowance of the respective base claim compels allowance of all dependent claims. Accordingly, claim 12, which depends on amended base claim 1, is also allowable.

IV. Canceled Claims 2, 4, 6, and 8

In response to an Office Action mailed December 13, 2005, which outlined a restriction requirement, the applicants have canceled claims 2, 4, 6, and 8, herein. The applicants wish to clarify that the remaining claims under consideration, which read on figures 7 and 8 of the original specification, are not limited by the specific embodiments shown in figures 7 and 8. Rather, the applicants assert as a matter of law the full and broad scope of coverage recited in the remaining claims.

V. Rejoined Claims 10 and 11

The applicants have rejoined claims 10 and 11 for consideration in the present application. Claim 10 has been amended to derive from amended base claim 1. Claim 11 is presented in its original form.

VI. Conclusion

Amended Claim 1 of the present application is allowable because it is novel and unobvious over Aratani. Aratani is silent regarding the recording film elements selected from the disclosed groups. Amended claim 1 is not obvious over Tsukuda in view of Aratani because the prior art, singly or in any motivated combination, does not teach, disclose, or suggest to one skilled in the art an optical recording medium with recording films that are mixed in the manner claimed. Accordingly, since amended base claim 1 is now allowable, dependent claims 5, 7, and 9-12 are also allowable.

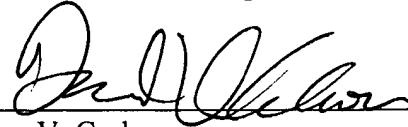
All claims and remarks are submitted with the good faith of the undersigned attorney.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

All of the claims remaining in the application are now clearly allowable.  
Favorable consideration and a Notice of Allowance are earnestly solicited.

Respectfully submitted,

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